



**Empowering Worship**

## YAMAHA GUIDE TO CHOOSING A BASS GUITAR

Along with drums, the bass guitar helps round out and anchor the overall sound of a band. A good bass player adds flavor and depth to the rhythm for every music genre.

An experienced player can also contribute rich harmonies and surprising, low-end solos on the electric bass. Because it is used in virtually every style of modern music, bass players can easily find a band to work with. The bass is also comparatively simple, straightforward and fun to learn. Still, it does help to know a few bass basics when choosing an instrument for the first time.

Bass guitars vary widely in quality and price, so before you start looking, determine how you intend to use the instrument and what your budget is. Yamaha has more than 50 years of experience handcrafting electric basses for players of every level, and at every price point. Currently, Yamaha's [TRBX](#) and [BB Bass Series](#) are popular with their build quality and playability.

For beginners, there are many good, affordable starter basses available. These instruments tend to have lower quality hardware and electronics, but they are very playable and will work well through the early stages of learning and performing. Yamaha [TRBX174](#) and [BB234](#) are great bass guitars for beginners.

More experienced or dedicated players may want to invest in a bass guitar with richer tonewoods, better electronics and upgraded hardware. A higher-quality bass will sound better, feel better and serve a musician longer.

## Bass Guitar Construction and Design

It is important to have a good understanding of the basic parts of a bass guitar before you start looking. Understanding how the instrument is designed and built, as well as knowing the different parts of the guitar will help you to ask the right questions to make an informed decision.

### THE ANATOMY OF A BASS GUITAR



### [Yamaha BB234](#)

## Neck

The neck of a bass guitar includes the headstock, fretboard and internal truss rod that connect to the body of the instrument. Necks for the Yamaha [TRBX500/600 series](#) are made of five pieces of wood for strength and the needed rigidity for years of use.

**HEADSTOCK:** The headstock is the wide portion at the top of the neck, where the bass strings terminate at tuning pegs. These tuning pegs — also called tuning keys, tuning machines or tuners — adjust the tension of each string, which changes the pitch. The strings are routed down the neck by the nut, a notched strip of hard plastic or bone attached to the top of the fretboard where the headstock meets the rest of the neck.

**FRETBOARD:** The fretboard or fingerboard is usually a thin piece of wood, typically made from rosewood, maple or ebony. All are excellent woods but can vary in quality. The best fretboards are smooth, hard and

dense so that they wear slowly. Fretboards are usually arched from side to side. This arch is called the radius, referring to an imaginary circle that would be formed if the arch of the fretboard were extended to make a circle. Some bass fretboards are close to flat, while others may have a radius as short as 10 inches. The shorter the radius, the more pronounced the arch of the fretboard. The fretboard is embedded with frets, which are narrow strips of metal. These frets divide the neck into half-step increments and determine where each note is played along the length of the neck.

Some basses have fretboards that are an integral part of the neck, rather than being a separate glued-on layer.

**TRUSS ROD:** Inside the neck is a metal truss rod that helps prevent the neck from bending or twisting. Bass strings are thicker than guitar strings and create a lot of tension on the neck. Truss rod adjustments allow the neck to be straightened if it becomes bowed or twisted and are also used to adjust string height for optimal playability.

## Types of Bass Necks

There are three kinds of bass guitar necks, their names indicate how the neck is attached to the body:

- **BOLT-ON**
- **NECK-SET NECK**
- **THRU-BODY NECK**

**BOLT-ON:** Most basses have bolt-on necks — the neck is bolted onto the body. The bolts should keep the neck stable and should not allow any up or down shifting. A solid, tight connection between the neck and the body is essential. It is also good to have more rather than less overlap of the neck and body for greater stability, better string vibration transfer and enhanced sustain. Yamaha has introduced a new series of instruments that features a 5-ply maple and mahogany laminated neck, in a bolt-on design that delivers a sharp attack and quick response. This durable construction is resistant to warping and twisting and adds the tight, penetrating character of maple combined with the warm tones of mahogany. Yamaha also uses a 6-bolt miter joint to attach the neck. Miter bolting holds the neck closer and tighter to the body fusing these two separate components into one. Compared to a conventional bolt-on joint, miter bolting offers a more efficient transfer of string vibration throughout the body for improved sustain and outstanding resonance that brings every note to life. This is available on the [BB Pro](#), [BB700](#) and [BB400](#) Series.

**SET-NECK:** Some bass guitars have set-necks where the neck is attached to the body with a mortise or dovetail joint rather than using bolts. A set-neck creates better resonance and sustain but can be more difficult to adjust.

**THROUGH-NECK:** Higher-end bass guitars feature through-necks, a continuous piece of wood that goes through the body. Wings are attached to each side of through-necks to form the upper and lower parts of the body. With a through-neck there is no joint between the neck and body that can inhibit vibration, resulting in better response and sustain. The Yamaha [BBNE2 Nathan East Signature Bass](#) uses this through-neck construction.

## Neck Shapes

Choosing what type of neck your bass should have is dependent on the size of your hand. Necks come in a few shapes: round, oval, flat back, “V” and asymmetrical (thinner either on bass or treble side).

Most jazz bass models have a “modern C-shape” neck that is usually made of maple, with maple, rosewood or Pau Ferro fingerboards available. The neck maintains a consistent thickness and tapers in slightly as it approaches the nut. The strings are in a noticeably narrower spacing at the nut, which gives it a distinct “tapered” feel that some players say leads to easier fingering.

## Bass Scale Lengths

Scale is the length between the nut and bridge where the strings are anchored at the tail end of the body. The most common scale length for basses is 34 inches. There are a few short-scale basses that are around 30 inches. These are a good choice for young players with small hands who may have trouble playing a standard-size instrument.

A long-scale neck usually has a 35 inches scale. This longer scale gives players a few more frets and is most often used for five- and six-string basses. It also improves string tension and minimizes floppiness on the low strings.

## Number of Frets

Most bass guitars have 21, 22 or 24 frets. Because most bass playing takes place in the lower positions, this is a matter of personal taste.

## Fingerboard

A coated fingerboard helps produce a whining, trebly “fretless sound” and longer sustain, which wears much longer with round-wound strings. Uncoated fingerboards have a warmer, more natural sound.

## Electric Bass Body Types

- **SOLID BODY**
- **HOLLOW BODY**

**SOLID BODY:** These basses are the most common type. In better instruments, solid bodies are often made of a solid piece of wood, usually alder, maple, swamp ash, mahogany or some other wood that transfers vibration well. All Yamaha electric basses are made from either solid alder or mahogany, and even laminates flamed maple onto the top of their [TRBX600 series](#) bass. In lower-priced basses, the bodies may be made using laminated wood plies, softer woods or pressed woods. There are even basses with plastic bodies.

**HOLLOW BODY:** These bass guitars have a hollow body like an acoustic guitar, but they use the same magnetic pickups as solid-body basses. Hollow-body basses are used mostly by jazz and folk players, and for music that is quieter and requires a more acoustic-like tone. Hollow-body basses are lighter, but they are usually limited in the volume they can produce because they feedback more easily than solid-body basses at high volume. There are also a few semi-hollow-body basses that have a solid center block and hollow outer halves of the body. They are less prone to feedback.

Another type of hollow-body bass is the acoustic-electric. This is really an acoustic instrument usually equipped with a piezo pickup that allows it to be amplified. Most often, the piezo pickup is located under the bridge, while an onboard preamplifier allows tonal adjustments when the bass is amplified.

## Bass Bridges

The bass guitar's strings terminate at the bridge, where their vibrations are transmitted to the body, creating the resonance and tone that the pickups capture and amplify. The strings pass over notches, called bridge saddles, which can be moved up and down to adjust the action, or forward and back to adjust intonation. Better bridges are made of brass and are often plated with chrome or nickel silver. A bridge with more mass and weight will usually anchor the strings better and transfer more vibration from the strings to the body.

There are three different bridge types on most electric bass guitars:

- **THROUGH-BRIDGE**
- **STRING-THROUGH BODY**
- **BRIDGE-AND-TAILPIECE COMBINATION**

On a through-bridge, the strings are threaded through the back of the bridge and over the saddles. On a string-through, the strings are fed through the body of the bass and over the saddles. A bridge-and-tailpiece combination feeds the strings through a separate tailpiece that is not connected to the saddles.

## Yamaha Unique Bridge and Saddle

The Yamaha [BB series](#) basses incorporate diagonal-body-through stringing where strings are angled at the saddle and pass through the instrument to the bridge at a 45° angle, as opposed to the traditional vertical stringing method that places more stress on the strings. Diagonal-body-through stringing significantly reduces this stress while transferring string vibration to the body reliably and efficiently. Strings can also be set to the tail end of the bridge, which comes equipped with a convertible saddle that can be adjusted to two different angles for more precise tonal shaping and feel. The rounder side of the saddle gives a slightly duller sound, while the more angled area of the saddle produces a slightly tighter sound.

The Yamaha [BB700](#) and [BB Pro](#) are equipped with the vintage plus bridge, designed with a diagonal cut at the string's contact point on the saddle to form a more stable fulcrum. This produces a clear, well-shaped sound.

Brass saddles deliver a slightly deeper low-end, while steel bridge plates offer more response. All screws and springs are made of stainless steel to guard against corrosion. The [BB400](#) is equipped with a vintage-light bridge with an offset low E string.

## Pickups: Single-Coil or Humbucker

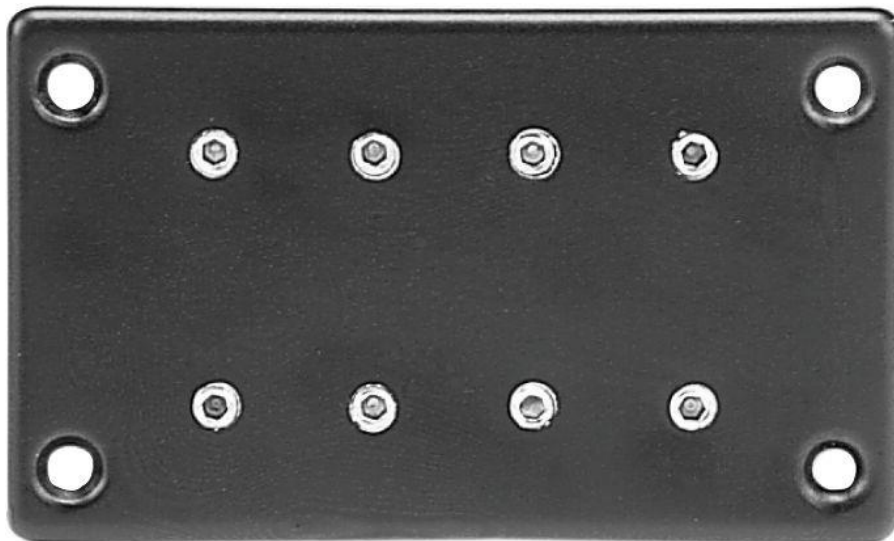
Pickups are electromagnetic devices that capture the sound created by the vibrating strings and body of the bass, converting it to an electronic signal. Most bass guitars have two sets of pickups to provide a greater tonal range. Pickups closer to the fretboard have a smooth, low-end sound, while the pickups closer to the bridge have an edgy, mid- to high-end tone.

The most common types of pickups are single-coil and humbuckers, and most others are simply variations on one of these two types.

**SINGLE-COIL:** Single-coil pickups were the original type of pickups and the simplest. Each pickup has only one coil and one magnet, which creates a bright, focused sound. Single-coil pickups can be noisy, which is why humbucking pickups were developed.



**HUMBUCKING:** Humbucking pickups were created to cancel the hum or noise of the single-coil, but they have a fatter sound in addition to being more noise-free. The humbucker sound can get muddy at higher volumes.



**SPLIT-COIL:** One common variation is the split-coil pickup. It is a single-coil pickup wired to function like a humbucker. Two halves of the pickup are separated, and one side is reversed in polarity to the other. With the split-coil, you get a tone that is closer to the single-coil sound but with the quietness of the humbucker.

## Electronics: Passive vs. Active

The terms active and passive refer to the preamp circuitry of the bass. The preamp boosts the pickups' output and provides tone-shaping controls.

**PASSIVE:** Passive preamp systems operate without any power source and have fewer controls, usually a volume knob, a tone knob and a blend control if there are two pickups. One advantage of these systems is that they do not depend on a battery that can die in the middle of a performance. Another plus is the simplicity of operation. Passive electronics have a lo-fi sound that some players prefer to the hi-fi sound of active electronics. The Yamaha [BB200](#), [BB400](#) and [BB Pro](#) basses have a passive tone circuit.

**ACTIVE:** Active basses need power, usually provided by an onboard battery. The advantages of an active preamp system are stronger output and more control over tone shaping. Active basses often have separate equalization (EQ) controls that are divided into frequency bands, such as a low, mid and high-frequency boost/cut controls. They can also have contour switches that instantly reshape the EQ profile. Some active basses have controls that let you change the wiring of your pickups on the fly from series to parallel for dramatic tonal shifts. A coil tap switch found on some basses with active electronics deactivates one set of coils in a humbucking pickup to make it sound like a single-coil pickup. You can find this feature on the Yamaha [TRBX204](#) and models with higher numbers, as well as on the versatile [BB734a](#) and [BB735a](#).

## How Many Strings?

### FOUR-STRING BASS GUITARS

Most bass guitars have four strings. New players should start with this instrument. These basses are perfectly adequate for most musical styles, and the necks are smaller than those on five- and six-string basses, making them easier to handle, learn on and play.



[Yamaha BB234](#)

### FIVE-STRING BASS GUITARS

Five-string basses add a lower B string, giving the instrument a deeper range. The neck of a five-string bass is wider than a four-string, making it a little harder to play. Five-string basses are popular with some hard rock, metal, fusion and jazz bassists.



[Yamaha TRBX605FM](#)



## SIX- STRING BASS GUITARS

Six-string basses have an even more extended range due to their low B string and high C string. Six strings require a wider neck yet, which can be difficult for many players to handle. Though challenging, they are ideal for bass players who do a lot of soloing as they widen the range and provide room for greater creativity.



[Yamaha TRBJP2](#)

## FRETLESS BASSES

Standard bass guitars have fretted necks with metal frets dividing the fingerboard into half-step increments. These frets make it easy to see where each note is played on the neck.

A fretless bass has a smooth neck, like an upright bass or violin. Hitting the right notes with the right intonation is challenging and not suitable for beginners. Fretless bass players rely on muscle memory and a well-trained ear. They choose the fretless bass for its smoother, warmer sound and its ability to provide glissando effects like a standup acoustic bass.

## Bass Tonewoods

The type of wood used in the body of a bass guitar will impact its tone and resonance. New players do not need to be too concerned with the type of wood used for their bass guitar body. But if you are looking for a specific sound from your bass, then the body wood could be an important factor.

**ALDER:** often used for bass guitar bodies, alder creates a very balanced tone with great clarity and a very full sound.

**AGATHIS:** A popular body wood because it is relatively inexpensive, Agathis provides a balanced tone with a slight emphasis on low-mid tones that gives it a rich sound.

**ASH:** Several ash species are used to make bass guitar bodies. They have subtle differences, but in general, ash produces a bright, full sound, like alder. Swamp Ash is popular due to its beautiful grain.

**BASSWOOD:** Frequently used on less expensive instruments, Basswood is a softer wood that does not resonate as much as other tonewoods. Some bass players think basswood creates a flat sound, while others feel the short sustain is ideal for fast, complex playing techniques.

**MAHOGANY:** A popular Tonewoods for bass guitars, Mahogany produces a soft, warm tone that emphasizes the low-mid and lower-range tones and creates longer sustain. It is a dense wood and will feel heavier on your shoulder than Ash or Agathis.



**MAPLE:** A dense wood, maple creates a well-sustained sound like mahogany. Maple produces a bright, clear tone that many musicians find valuable in a studio setting.

Many other woods are used for bass guitar bodies. High-end models may be made of exotic species such as Bubinga, Wenge, Koa or Cocobolo.

## Acoustic Bass Guitars

With all the same characteristics of a 6-string acoustic guitar, an acoustic bass produces sound through a resonant hollow body. This allows you to play unplugged with a full-bodied, robust sound, which is sometimes more appropriate for acoustic music. However, there are many models of acoustic-electric bass guitars, which gives you the hollow-body sound of an acoustic bass with the ability to plug in to an amp for additional volume.

## Which Bass is Right for Me?

Here are a few guidelines for the first-time bass buyer to consider:

- Buy the best bass guitar you can afford. A good bass will make learning easier, and you will not outgrow it as quickly.
- Choose a fretted instrument unless you are ready for the challenge of a fretless guitar.
- Choose a short-scale bass if you are young, small or have unusually small hands.
- For simplicity's sake, choose a 4-string instrument.
- Select a bass guitar with simple controls so you can focus on the strings and not be distracted by knobs.
- Choose a bass in a color and shape that appeals to you. Its looks will not make it sound better, but a cool-looking bass can motivate you to play more.

## Contact Us

Please visit our [website](#) to see a lineup of Yamaha bass guitars.

If you have any questions or would like more information on Yamaha products, please visit our Inquiry Page at [www.yamahaworship.com](http://www.yamahaworship.com). We are waiting to hear from you.